

measuring head imaging means for imaging the measuring head from the predetermined position, and

*11*  
*contd.* means for detecting the position in the world coordinate system of the measuring head on the basis of an image obtained by the imaging in the measuring head imaging means.

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*11*  
6. (Amended) The shape measuring device according to claim 1, characterized in that the guide rail takes such a shape that the distance thereof from the object to be measured is approximately constant.

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*11*  
11 (Amended) The shape measuring device according to claim 9, characterized in that the measuring head comprises  
light irradiation means for irradiating the object to be measured with a light flux,  
and  
imaging means for imaging a measuring point on the object to be measured which is irradiated with the light flux from the light irradiation means, to pick up a real image of the object to be measured and a virtual image of the object to be measured which is reflected on the mirror.

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*11*  
12. (Amended) The shape measuring device according to claim 9, characterized in that the mirror has a light reflective surface formed on its surface.

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24 16. (Amended) The shape measuring device according to claim 13, characterized by comprising guide means for regulating the posture of the measuring head such that the light flux irradiated from the light irradiation means in the measuring head is perpendicularly emitted to the light reflective surface of the mirror.

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17. (Amended) The shape measuring device according to claim 13, characterized in that the guide means regulates a moving path of the measuring head.

25 22. (Amended) The shape measuring device according to claim 9, characterized in that the mirror comprises a light reflecting plate having a light reflective surface formed on its surface and a transparent plate formed on the light reflecting plate.

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26 25. (Amended) The shape measuring device according to claim 22, characterized by comprising guide means for regulating the posture of the measuring head such that the light flux irradiated from the light irradiation means in the measuring head is perpendicularly emitted to the light reflective surface of the mirror.

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#### REMARKS

Claims 1-25 are pending in this application. By this Amendment, claims 3, 4, 6, 11, 12, 16, 17, 22 and 25 are amended to correct the multiple dependencies thereof and to place this application into better condition for examination. No new matter has been added.